

Title (en)

Check detector for glass bottle neck and finish portion

Title (de)

Vorrichtung zum Detektieren von Fehlern im Hals- und Endbereich einer geformten Flasche

Title (fr)

Appareil de détection de défauts au goulot et à la partie finie d'une bouteille moulée

Publication

EP 0952443 B2 20151216 (EN)

Application

EP 99108092 A 19990423

Priority

JP 13117698 A 19980425

Abstract (en)

[origin: EP0952443A1] A check detector of a glass bottle neck and finish portion (1) improves the check detection accuracy by positively reducing disposal of non-defective bottles. The check detector comprises a bottle rotating means (35, 36, 37) for rotating a glass bottle (3) in the course of a glass bottle handling route, a slide block (42) for changing the position in the width and vertical direction of the handling route, a plurality of light emitters (21 - 32; 60) for emitting the neck and finish portion (1) of the glass bottle (3) with light, while the emitting light is converged to the emitted region from directions which differ from each other, a plurality of light receivers (51 - 58) equipped with light receiving sensors (2) for detecting the light reflected at checks generated at the neck and finish portion (1), the light reflected at the mold seam formed at the neck and finish portion (1), and the direct light transmitting the neck and finish portion (1) via lenses (64), a light emitter control section (46) for switching a plurality of the light emitters (21 - 32; 60) successively and repeatedly in the light emitting condition, and a light receiver control section (47) for constantly operating a plurality of the light receivers (51 - 58) in the light receiving condition so that each of the reflected lights and the direct light are input as data, wherein each of the light receiving sensors is composed with diode arrays comprising a plurality of light receiving elements divided in advance so as to correspond to the vertical position of the neck and finish portion and at the same time, the data of the light reflected at the seam and the data input of the direct light transmitting the neck and finish portion are deletable, respectively. <IMAGE>

IPC 8 full level

G01N 21/90 (2006.01)

CPC (source: EP US)

G01N 21/9036 (2013.01 - EP US); **G01N 21/9054** (2013.01 - EP US)

Citation (opposition)

Opponent :

- WO 8103706 A1 19811224 - HERMANN P
- DE 9003522 U1 19910103
- DE 9101934 U1 19910508
- DE 19601114 C2 20000907 - HEYE HERMANN FA [DE]

Cited by

EP2267437A1; WO2004040279A1; EP2623962A4; EP2434276A1; CN108132259A; CN114590990A; CN112763462A; CN102667453A; CN110431405A; FR2846422A1; EP1560017A4; EP1106993A3; EP4242642A1; US10000405B2; US8786865B2; WO0155705A1; US7329855B2; DE202013104938U1; EP2016397A1; EP1346205B1; EP1106993A2

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